



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

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STATEMENT OF LEGAL AND FACTUAL BASIS

Perdue AgriBusiness, Incorporated
Chesapeake, Virginia
Permit No. TRO-60277

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Perdue Farms, Incorporated has applied for a Title V Operating Permit for its Chesapeake facility which consists of two divisions - Oilseed Processing Plant and the Grain Elevator Facility. The two independently operated, but contiguous soybean and other grains processing plants, under the common control of Perdue AgriBusiness, Incorporated share a common air stationary source registration number VA-60277. The Department has reviewed the two applications and has prepared a single Title V Operating Permit for the two plants combined.

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Date: June 30, 2010

Jane A. Workman
Air Permit Manager

Date: 6/30/10.

Maria R. Nold
Deputy Regional Director

Date: July 1, 2010

STATEMENT OF LEGAL AND FACTUAL BASIS

PERDUE AGRIBUSINESS, INCORPORATED

FACILITY INFORMATION

<u>Permittee</u>	Perdue AgriBusiness, Incorporated 501 A Barnes Road Chesapeake, Virginia 23324
<u>Facility</u>	Perdue AgriBusiness, Inc., Chesapeake Oilseed Plant and Grain Elevator 501 A Barnes Norfolk, Virginia 23324

AFS ID No.: 51-550-00038

SOURCE DESCRIPTION - Soybean Plant

SIC Code: 2075, NAICS [311222] – Extraction of soybean oil from raw soybeans, processing of soybean flakes into meal and the pelletizing of soybean hulls and other byproducts into hull pellets.

Perdue's production operations consist of four distinct procedures: soybean preparation, soybean hull pelletizing, soybean oil extraction, and soybean meal processing.

Soybean preparation: cleaning, drying, cracking, dehulling, and flaking of raw soybeans, resulting in hulls and flakes of soybean meal. Emissions are particulate.

Soybean hull pelletizing: hulls and screenings are ground and then pelletized in specially designed equipment. Emissions are particulate.

Soybean oil extraction: extracts soybean oil from soybean flakes (using hexane as a solvent). The extraction process produces a soybean oil/hexane mixture and hexane-laden flakes. While hexane is recovered for re-use, some fugitive emissions do occur. Emissions are VOC/hexane.

Soybean meal processing: drying, cooling, and grinding the spent flakes produced in the extraction process (after hexane has been removed from the flakes). The spent flakes are referred to as soybean meal and this is one of the products. The primary emissions from this process are particulate.

SOURCE DESCRIPTION - Grain Elevator

County-Plant Identification Number: 51-550-00048

NAICS Code: 424510 - Grain elevator for the storage, drying and shipping of various grains, such as soybeans, meal, corn and others.

The facility is part of a Title V major source of VOC and HAPs. This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility is currently permitted under a State Operating Permit issued on February 19, 2009.

COMPLIANCE ASSURANCE MONITORING

All of the emission units at a Title V facility that have major levels of emissions for a pollutant must be considered for CAM applicability. Perdue Farms has several emissions units that are considered major for emissions of either particulate or hexane. The soybean-oil extraction unit is covered by a NESHAP that was published after the cutoff date for CAM. This serves to afford an exemption for the units that are part of the extraction process. Therefore, a survey of the facility calculations for PTE is the next step to identify any emissions units that may have major source levels of particulate or PM10 emissions. The permit application shows several permitted and unpermitted emission units that have apparent uncontrolled emissions above the 100-ton threshold. The PTE for these units assumes a control efficiency of 99% for the fabric filters and a lower efficiency for various cyclones. Some of these units can be found in the NSR permits for the hull pelletizing process and the dryer/cooler installation. For units not subject to the Rule, periodic monitoring is appropriate.

CAM PLAN ANALYSIS

Overview

A review of the permit application calculations reveals that the following emission units have major source levels of particulate emissions; Units # 132, 136/43, 754, 175, 156, CFB-1, 104, 107A-E, 111, 113A-F/520, 113H-M/521, 163/532, 164/533 and GH-1, (Grain Handling exceeds 100 tons of PM10). These emission units will either have a permit limit or are subject to the particulate matter standard. All of the units have some type of control equipment and thus are subject to the CAM Rule. This CAM Plan has been fully incorporated into the Title V permit in the Facility Wide Section X. Therefore, there is no attached CAM Plan for this permit.

Monitoring Approach

Visible emissions are used as an indicator. Normal process operations will not produce conditions that adversely affect the cyclones or fabric filters, so no process operational parameters will be monitored. The following procedure will be used to monitor visible emissions on a daily basis. A one-minute observation will be performed and the results recorded in a logbook by the observer. An excursion is defined as the presence of visible emissions and no averaging is allowed. If any visible emissions are detected, corrective action must be taken. Records shall be kept of all observations results, any corrective actions required and any Quality Improvement Plans that are developed and implemented.

Quality Improvement Plan

If there are five excursions in any consecutive six-month period, a Quality Improvement Plan will be developed and implemented.

INCLUSION OF APPLICABLE REQUIREMENTS

This Title V permit document, by definition, contains all of the applicable requirements for the emission units at the Perdue Chesapeake Oilseed Plant. The expected result of including all applicable requirements for various emission units is that some units are affected by two or more requirements dealing with the same subject. At the Perdue Facility, the predominant pollutant outside of the extraction unit is particulate. These emissions are not only subject to discreet emission limitations in a NSR permit condition, but also are subject to the standards for particulate and visible emissions in Chapter 40 or Chapter 50 of the Regulations. It is not unusual in a Title V permit to have multiple applicable requirements for a single emission unit. Compliance Assurance Monitoring may also add an additional requirement to some emission units, but only if they are not exempt. The table of CAM applicable emission units are not exempt from CAM and have potential uncontrolled emissions of more than 100 tons of particulate. CAM does not replace other monitoring that already exists in the Title V permit; all of the monitoring requirements remain valid. What CAM does implement is an additional level of monitoring for affected emissions units. The objective of the Title V permit is to identify and list all of the applicable requirements from NSR permits, the State Regulations, the Federal Regulations and any other valid source. In drafting the Title V permit for Perdue, the intent was to include all valid applicable requirements.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

COMBINING TWO FACILITIES IN THIS TITLE V PERMIT

At issuance of this Title V permit for previously two separate facilities, the Registration No. for the grain elevator; 60519, will need to be changed in CEDs, so that both facilities fall under the same registration No.: 60277. The inspector will make the changes in the CEDs database after the permit has been issued.

Emission Units

Oilseed Plant equipment to be operated consists of:

Emission Unit ID	Vent and Stack ID	Emission Unit Description	Size/Rated Capacity*	Applicable Permit Date
31/33		Bean Tank 194; soybean grain handling	125 tons per hour	N/A
32/34		Bean Tank 194; soybean grain handling	125 tons per hour	N/A
33/35		Bean Tank 194; soybean grain handling	125 tons per hour	N/A
34/36		Bean Tank 194; soybean grain handling	125 tons per hour	N/A
35/37		Bean Tank 194; soybean grain handling	125 tons per hour	N/A
44	S-1	Bean Tank 194; soybean grain handling	125 tons per hour	N/A
43	S-2	Bean Tank 194; soybean grain handling	125 tons per hour	N/A
42	S-3	Bean Tank 195; soybean grain handling	125 tons per hour	N/A
41	S-4	Bean Tank 195; soybean grain handling	125 tons per hour	N/A
40	S-5	Bean Tank 195; soybean grain handling	125.0 tons per hour	N/A
45	S-6	Whole bean surge tank; soybean grain handling	125 tons per hour	N/A
102	S-6	Whole bean aspirator	123 tons per hour	N/A
107A-E	S-9	Primary aspirators (5)	120 tons per hour	N/A
111	S-10	Secondary aspirators (4); soybean cracking, dehulling	119 tons per hour	N/A
130	S-6	Coarse hull aspirator; soybean cracking, dehulling	3.0 tons per hour	N/A
132	S-6	Mids hull aspirator, soybean cracking, dehulling	1.0 tons per hour	August 29, 1995
136/47	S-11	Hull grinding and product hull tank; soybean hull grinding and storage	21.3 tons per hour	August 29, 1995
113A-F/520	S-8	Flakers/discharge drag (A to F); soybean flaking	61 tons per hour	N/A
113H-M/521	S-8	Flakers/discharge drag (H to M); soybean flaking	61 tons per hour	N/A
EA-1	S-33	Extraction processes and solvent recovery; from soybean oil extraction process	70 tons per hour / 125 tons per hour soybeans	N/A
156	S-13 / S-14	DeSmet dryer/cooler; soybean meat drying/cooling	96 tons per hour	July 9, 2003
50	S-15	Clay tank; additive tank	25 tons per hour	N/A
163/532	S-16	Sifters/grinder feed drag; soybean meal sifting/grinding	121 tons per hour	N/A
164/533	S-16	Meal grinders/discharge drag; soybean meal sifting and grinding	125 tons per hour	N/A

44 46	S-17	North meal tank; meal storage	125 tons per hour	N/A
48	S-18	South pellet/meal tank; pellet/meal storage	125 tons per hour	N/A
75	S-19	Meal shed, meal loadout	125 tons per hour	N/A
1001	S-16	Meal scale, meal loadout	95 tons per hour	N/A
443	S-20	Pellet, hull and meal railcar loadout	125 tons per hour	N/A
444	S-21	Pellet and meal truck loadout	125 tons per hour	N/A
754	S-22	Production tank blower; hull transfer and storage elev.	21 tons per hour	N/A
758A	S-22	Pellet tank blower, pellet transfer and storage elevator	21 tons per hour	N/A
754	S-27	Production tank blower, soybean hull pelletizing	15 tons per hour	August 29, 1995
175	S-28	Pellet cooler; soybean hull pelletizing	15 tons per hour	August 29, 1995
AS-1	S-31	Ash silo; ash handling	30 tons per hour	January 13, 2004
ATL-1	S-32	Ash truck loadout; ash handling	60 tons per hour	January 13, 2004
GD-1	S-22	Grain Dust Transfer Line	21 tons per year	October 5, 2009
Fuel Burning Equipment				
CFB-1	S-30	Coal-fired boiler; steam generation	106.0 mmBtu per hour	January 13, 2004
TB-1	TBS-1	Natural gas-fired temporary boiler	< =96 mmBtu per hour	March 16, 2010

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

Pollution Control Equipment Consists of:

Unit Ref. Number	Stack Ref. No.	Control Equipment Description	Manufacturer and Model No.	% Efficiency	Pollutants Controlled
45	S-6	Whole bean dust collector	Pneumafil 11.5-316-8	99.6% efficient	PM/PM10
101	S-6	Whole bean dust collector	Pneumafil 11.5-316-8	99.6% efficient	PM/PM10
102	S-6	Whole bean dust collector	Pneumafil 11.5-316-8	99.6% efficient	PM/PM10
107A-E	S-9	Primary dehulling cyclone	Escher Wyss Cyclone Z1-200	95% efficient	PM/PM10
111	S-10	Secondary dehulling cyclone	Escher Wyss Cyclone Z1-200	95% efficient	PM/PM10
130	S-6	Whole bean dust collector	Pneumafil 11.5-316-8	99.6% efficient	PM/PM10
132	S-6	Whole bean dust collector	Pneumafil 11.5-316-8	99.6% efficient	PM/PM10
136/47	S-11	Ground hull dust collector	Rolfes Model 42-RLP-10	99% efficient	PM/PM10
113A-F/520	S-8	Flaker aspiration cyclone	Carter Day 56 HV	99% efficient	PM/PM10
113H-M/521	S-8	Flaker aspiration cyclone	Carter Day 56 HV	99% efficient	PM/PM10
156	S-13 and S-14	Dryer cooler cyclones (2)	Kice CKS 132	95% efficient	PM/PM10
50	S-15	Clay tank dust collector	Cargill Design	99% efficient	PM/PM10

163/532	S-16	Meal grinding dust collector	Alanco 188 RLP8	99% efficient	PM/PM10
164/533	S-16	Meal grinding dust collector	Alanco 188 RLP8	99% efficient	PM/PM10
1001	S-16	Meal grinding dust collector	Alanco 188 RLP8	99% efficient	PM/PM10
443	S-20	Loadout dust collector	Alanco 188RLP8	99% efficient	PM/PM10
444	S-21	Loadout dust collector	Alanco 188RLP8	99% efficient	PM/PM10
754	S-22	Hull receiving dust collector	Alanco 42RLR10	99% efficient	PM/PM10
758A	S-22	Hull receiving dust collector	Alanco 42RLR10	99% efficient	PM/PM10
754	S-27	Dust collector	Kice HRB24-10	99% efficient	PM/PM10
175	S-28	Pellet cooler cyclone	Model 1 HE 39 High Efficiency	99% efficient	PM/PM10
CFB-1	S-30	Dust collector	Fuller pulse 8 zone #128 Twin Line	99.4% efficient	PM/PM10
AS-1	S-31	Dust collector	Flex Kleen 84-CTBC-30	99% efficient	PM/PM10
ATL-1	S-32	Dust collector	Cargill design	99% efficient	PM/PM10

Emission Units

Grain Elevator Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
GD-1A	GDS-1	Shanzer Column Grain Dryer, Model 8P7	39.5 mmBtu/hour	Screen airs & Cyclone	GDC-1	PM-10	February 11, 2008
GD-2	GDS-2	Shanzer Column Grain Dryer, Model 8P7	39.5 mmBtu/hour	Screen airs & Cyclone	GDC-2	PM-10	February 19, 2009
Process A							
TL-1/CL-1	TLS-1	Truck/Container Loadout Station	200 tons/hour	Fabric Filter	FF-79	PM-10	February 9, 2007
MVU-1	MVUS-1	Neuro marine vessel Unloading Station	550 tons/hour	Fabric Filter	FF-Neuro	PM-10	June 19, 2002
MVL-1	MVLS-1	Marine vessel Loading - two arms	1680 tons/hour	Fabric Filters	FF-63/64	PM-10	June 5, 1979
TU-1	TUS-1	Truck Unloading Station - two bays	1120 tons/hour	Fabric Filter	FF-67	PM-10	June 19, 2002
TU-2	TUS-2	Old Truck Loading Station - two bays	600 tons/hour	Fabric Filter	FF-79	PM-10	June 5, 1979
RCU-1	RCUS-1	Rail Car Unloading Station	1390 tons/hour	Fabric Filter	FF-65	PM-10	June 5, 1979
RCL-1	RCLS-1	Rail Car Loading Station	420 tons/hour	Fabric Filter	FF-65	PM-10	June 5, 1979
GH-1	GHS-1	Grain Handling which includes: turnheads, weigh stations, ship loading gallery and other	1680 tons/hour	Fabric Filters	Various fabric	PM-10	June 5, 1979

		internal grain transfer operations			filters (see below)		
TH-1 to TH4	THS-1	Turnheads for new concrete storage silos	1680 tons/hour	Fabric Filters	FF-69	PM-10	June 19, 1992
WS-1 to WS-4	WSS-1	Weigh Stations for Loading and Unloading	1680 tons/hour	Fabric Filters	FF-65/66	PM-10	June 5, 1979
SLG-1	SLGS-1	Ship Loading Gallery	1680 tons/hour	Fabric Filter	FF-62	PM-10	June 5, 1979
IGT-1	IGTS-1	Internal Grain Transfer Operations	1680 tons/hour	Fabric Filter	FF-68	PM-10	June 5, 1979
SS-1	SSS-1	New Concrete Storage Silos	1.5 million bushels	Fabric Filter	FF-69	PM-10	June 5, 1969
SS-2	SSS-2	Original Steel Storage Silos	5.0 million bushels	Fabric Filter	Various FF	PM-10	December, 2006

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

Pollution Control Equipment Consists of:

Unit Ref. No.	Vent/Stack No.	Device Ref. Number	Control Equipment Description	Manufacturer and Date of Construction	Size/Rated Capacity	Pollutants Controlled
GD-1A	GDS-1	SA-1/C-1	24 mesh screen airs and cyclone	N/A	95% efficient	PM/PM10
GD-2	GDS-2	SA-2/C-2	24 mesh screen airs and cyclone	N/A	95% efficient	PM/PM10
TL-1/CL-1	TLS-1	FF-79	Fabric filter	N/A	99% efficient	PM/PM10
MVU-1	MVUS-1	FF-Neuro	Fabric filter	N/A	99% efficient	PM/PM10
MVL-1	MVLS-1	FF-63/64	Fabric filters	N/A	99% efficient	PM/PM10
TU-1	TUS-1	FF-67/79	Fabric filters	N/A	99% efficient	PM/PM10
TU-2	TUS-2	FF-67/79	Fabric filters	N/A	99% efficient	PM/PM10
RCU-1	RCUS-1	FF-65	Fabric filter	N/A	99% efficient	PM/PM10
RCL-1	RCLS-1	FF-65	Fabric filter	N/A	99% efficient	PM/PM10
GH-1	GHS-1	Various FF	Fabric filters	N/A	99% efficient	PM/PM10
TH-1 to TH4	THS-1	FF-69	Turnheads, new concrete storage silos	N/A	99% efficient	PM/PM10
WS-1 to WS-4	WSS-1	FF-65, 66	Fabric filters	N/A	99% efficient	PM/PM10
SLG-1	SLGS-1	FF-62	Fabric filter	N/A	99% efficient	PM/PM10
IGT-1	IGTS-1	FF-68	Fabric filter	N/A	99% efficient	PM/PM10
SS-1	SSS-1	FF-69	Fabric filter	N/A	99% efficient	PM/PM10
SS-2	SSS-2	Various FF	Fabric filters	N/A	99% efficient	PM/PM10

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY - Oilseed Plant

A copy of the emissions for the 2008 emissions statement is attached. Emissions are summarized in the following tables.

2008 Actual Emissions

	2008 Criteria Pollutant Emissions in Tons per Year					
Emission Unit	VOC	CO	SO ₂	*PM ₁₀	NO _x	Lead(Pb)
Facility	348.253	59.51	348.253	21.6943	130.922	0.0
Total	348.253	59.51	348.253	21.6943	130.922	0.0

* PM2.5 emissions are assumed as identical to the PM10 emissions above.

2008 Facility Hazardous Air Pollutant Emissions

Pollutant	2008 Hazardous Air Pollutant Emission in Tons/Yr
non-VOC non-PM10 HAPs	2.666
Priority HAPs; including hexane	154.934
Total HAPs	157.60

EMISSIONS INVENTORY - Grain Elevator

A copy of the 2008 annual emission update is attached. Emissions are summarized in the following tables.

2008 Actual Emissions

	2008 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO ₂	PM ₁₀	NO _x
Grain dryers	0.061	0.97	0.007	1.6	1.15
Grain handling				9.1	
Total	0.061	0.97	0.007	10.7	1.15

2008 Facility Hazardous Air Pollutant Emissions

Pollutant	2008 Hazardous Air Pollutant Emission in Tons/Year
Total HAPs	No Hazardous Air Pollutants were reported

EMISSION UNIT APPLICABLE REQUIREMENTS – Hull Grinding and Pelletizing Line

Limitations

Following are limitations from the existing New Source Review permit issued October 5, 2009:

- Condition 3: describes the control technology for particulate emissions.
- Condition 4: control of fugitive emissions and fugitive dust.
- Condition 7: establishes production limit for the new hull pelletizing operation.
- Condition 8: emission limits for the hull pelletizer operation.
- Condition 9: establishes the maximum visible emission limits for the hull pelletizer.

Monitoring

Following are monitoring requirements from the existing New Source Review permit issued October 5, 2009

- Condition 5: monitoring devices and operating requirements.
- Condition 6: observation of the monitoring devices.

Notifications

Following are notification requirements from the existing New Source Review permit issued October 5, 2009:

- Condition 12: initial notifications required for the hull pelletizer modification.
- Condition 13: construction requirements and permit invalidation.
- Condition 14: conditions where the permit may be suspended or revoked.
- Condition 18: notifying the DEQ about facility or control equipment malfunctions.

Recordkeeping

Following are recordkeeping requirements from the existing NSR permit issued October 5, 2009.

- Conditions 10, 16 and 17: recordkeeping requirements.

Testing

Following are testing requirements from the existing NSR permit, issued July 9, 2003.

- Condition 11: guidance on emission testing of the hull pelletizer.

General Conditions

- Condition 15: right of entry to facility; General Condition.
- Condition 19: procedures to prevent violation of a primary ambient air quality standard.
- Condition 20: requirements for transfer of ownership; existing permit.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

- 9 VAC 5-50-80: New Source Standard for Visible Emissions

Streamlined Requirements

There are no streamlined conditions for this permit.

EMISSION UNIT APPLICABLE REQUIREMENTS – De Smet dryer/cooler [Unit # 156]

Limitations

Following are limitations from the existing NSR permit, issued July 9, 2003:

- Condition 3: describes the control technology for particulate emissions.
- Condition 4: establishes soybean meal throughput limit for the dryer/cooler.
- Conditions 5 and 6: limiting criteria pollutant emissions and visible emissions.
- Condition 7: requirements by reference states the applicable MACT; 'GGGG'.
- Condition 17: violation of ambient air quality standard; Facility Wide Condition.
- Condition 19: revoking and/or suspending permits; General Condition.
- Condition 13: entry requirements for regulating authorities, General Condition.
- Condition 21: registration update; General Condition.

Recordkeeping

Following are recordkeeping requirements from the existing NSR permit, issued July 9, 2003.

- Conditions 8 and 18: recordkeeping requirements.

Notifications and Reporting

Following are notification requirements from the existing NSR permit issued July 9, 2003.

- Condition 11: Initial Notification; installation/startup/testing of NSPS equipment.
- Conditions 14, 15 and 16: Notifications for maintenance, malfunctions, and HAP processes.

Testing

Following are testing requirements from the existing NSR permit, issued July 9, 2003.

- Conditions 9 and 10: testing and monitoring requirements.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

- 9 VAC 5-50-80: New Source Standard for Visible Emissions

Streamlined Requirements

Following are conditions from the existing NSR permit, issued July 9, 2003 that no longer apply to the facility.

- Condition 12: permit invalidation due to delay in construction beyond 18 months. The DeSmet dryer/cooler has been constructed and has reached full production prior to the drafting of the Title V Permit.

EMISSION UNIT APPLICABLE REQUIREMENTS – Vogt Coal-fired Boiler [CFB-1] and Ash Silo [AS-1]

Limitations

Following are limitations from the existing NSR/PSD permit issued January 13, 2004:

- Conditions 3, 4 and 5: describe the control technology for boiler and ash silo emissions.
- Conditions 6 and 7: prescribe the approved fuel and the coal throughput for the boiler.
- Conditions 8, 9, 10 and 11: limits criteria pollutant emissions, coal specs and visible emissions.
- Condition 15: entry requirements for regulating authorities; General Condition.
- Condition 18: violation of ambient air quality standard; Facility Wide Condition.
- Condition 20: revoking and/or suspending permits; conditions for; General Condition.
- Condition 21: change of ownership; General Condition.
- Condition 22: registration update; General Condition.

Monitoring

Following are monitoring requirements from the existing NSR/PSD permit issued January 13, 2004

- Condition 12: describes monitoring for visual emissions.

Recordkeeping

Following are recordkeeping requirements from the existing NSR/PSD permit issued January 13, 2004

- Conditions 13 and 19: on-site and maintenance recordkeeping requirements.

Notifications and Reporting

Following are notification requirements from the existing NSR/PSD permit, issued January 13, 2004.

- Conditions 16 and 17: Notifications for control equipment maintenance and malfunctions.

Testing

Following are testing requirements from the existing NSR/PSD permit, issued January 13, 2004.

- Condition 14: testing and monitoring requirements for construction; test ports.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

- 9 VAC 5-50-80: New Source Standard for Visible Emissions

Streamlined Requirements

There are no streamlined conditions for this permit.

EMISSION UNIT APPLICABLE REQUIREMENTS – Temporary Boiler (Emission Unit ID #TB-1)

Limitations

Following are limitations from the existing NSR permit issued March 16, 2010:

- Conditions 3 and 4: describe the control technology for boiler operation and emissions.
- Conditions 5 and 6: prescribe limits for siting the boiler at the Perdue facility.
- Conditions 7, 8 and 9: fuel specifications and throughput.
- Condition 10 and 11: Emission limits/visible emissions for the temporary boiler.
- Condition 13: requirements by reference; citing the NSPS, Subpart Dc.

Monitoring

Following are monitoring requirements from the existing NSR permit issued March 16, 2010

- Condition 12: describes monitoring for visual emissions.

Recordkeeping

Following are recordkeeping requirements from the existing NSR/PSD permit issued March 16, 2010

- Condition 14: recordkeeping.

Notifications and Reporting

Following are notification requirements from the existing NSR/PSD permit, issued March 16, 2010.

- Conditions 15 and 16: notification requirements.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

- 9 VAC 5-50-80: New Source Standard for Visible Emissions

Streamlined Requirements

There are no streamlined conditions for this permit.

NATIONAL EMISSION Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart GGGG

Regulatory Requirements

- Condition 1: describes the applicable regulation; 40 CFR 63, Subpart GGGG.
- Condition 2: emission requirements; calculating a compliance ratio.
- Condition 3: compliance requirements.
- Condition 4: Facility Plan for demonstrating compliance.
- Condition 5: notification requirements of the regulation.
- Condition 6: reports and schedules.
- Condition 7: recordkeeping.
- Condition 6: reports and schedules.
- Condition 8: NESHAP General Provisions.

FUEL BURNING EQUIPMENT REQUIREMENTS - GD-1A and GD-2

Limitations

Following are limitations from the existing State Operating Permit issued February 19, 2009

- Condition 22: sets the approved fuel for the grain dryers.
- Condition 23: limits the fuel throughput of natural gas to the grain dryers.
- Condition 26: emission limits for the grain dryers.
- Condition 30: visible fugitive emission limit.
- Condition 24: requirements by reference; NSPS Subpart DD.

PROCESS EQUIPMENT REQUIREMENTS - (emission units GD-1A, GD-2, TL-1/CL-1, MVU-1, MVL-1, TU-1, TU-2, RCU-1, RCL-1, GH-1, SS-1 and SS-2)

- Condition 3: emission controls for marine vessel unloading.
- Condition 4: emission controls for marine vessel loading.
- Condition 5: emission controls for rail car loading and unloading
- Condition 6: emission controls for truck unloading.
- Condition 7: emission controls for grain handling operations.
- Condition 8: emission controls for the new storage silo vents.
- Condition 9: emission controls for the grain dryers.
- Condition 10: emission controls for truck and container loading.
- Condition 13: limit throughput for truck unloading.
- Condition 14: limit throughput for rail car unloading.
- Condition 15: limit throughput for marine vessel unloading.
- Condition 16: limit throughput for the two grain dryers.
- Condition 17: limit throughput for grain handling operations.
- Condition 18: limit throughput for both old and new storage silos.
- Condition 19: limit throughput for rail car loading.
- Condition 20: limit throughput for marine vessel loading
- Condition 21: limit throughput for truck and container loading.
- Condition 25: state the emission standards and limits for PM & PM10 emission points.
- Condition 27: set the Facility-Wide emission limits for the facility.
- Condition 28: set the visible emission limit for the NSPS fabric filters.
- Condition 29: set the visible fugitive emission limits for the NSPS loading and unloading.
- Condition 31: set the visible fugitive emission limits for truck and container loading.
- Condition 32: set the visible fugitive emission limits for NSPS marine vessel loading.

Monitoring

Following are monitoring requirements from the existing State Operating Permit issued February 19, 2009.

- Condition 11: requirements for monitoring devices on all fabric filters.
- Condition 12: frequency of observations of the monitoring devices.

Records

Following are recordkeeping requirements from the existing State Operating Permit issued February 19, 2009.

Condition 33: On Site recordkeeping requirements.

Testing

Following are testing requirements from the existing State Operating Permit issued February 19, 2009

Condition 34: Initial Compliance Determination for the second Shanzer grain dryer.

General Conditions

Following are general conditions from the existing State Operating Permit issued February 19, 2009

Condition 37: Permit Suspension/Revocation

Condition 38: Right of Entry

Condition 39: Maintenance/Operating Procedures

Condition 40: Record of Malfunctions

Condition 41: Notification for Facility or Control Equipment Malfunction

Condition 42: Violation of Ambient Air Quality Standard

Condition 43: Change of Ownership

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80: New Source Standard for Visible Emissions

Streamlined Requirements

Following are conditions from the existing NSR permit, issued February 19, 2009 that no longer apply to the facility.

Condition 35: Initial Notifications. The initial notifications of construction and startup of the second Shanzer grain dryer have been received, so this condition can be streamlined out of the Title V permit.

Condition 36: permit invalidation due to delay in construction beyond 18 months. The second Shanzer dryer has been constructed and so this condition can be streamlined out of the Title V Permit.

FACILITY WIDE CONDITIONS

Following are applicable requirements that apply facility-wide or to groups of emission units.

Limitations

Condition X.A.1: Existing source standard for particulate matter.

Condition X.A.2: Maximum emission rate for particulate matter.

Condition X.A.3: Determination of individual emission rates.

Condition X.A.4: Interpolation of values for the process weight rate.

Condition X.A.5: Interpretation of regulations.

Condition X.A.6: Interpolation equation for the process weight rate.
Condition X.A.7: Extrapolation equation for the process weight rate.
Condition X.A.8: Existing source standard for visible emissions.
Condition X.A.9: New source standard for visible emissions.
Condition X.A.12: Violation of ambient air quality standard.

Monitoring

Condition X.B.1 through X.B.8: Compliance Assurance Monitoring.
Condition X.B.9: Visible emissions monitoring for all emission units with limits.

Recordkeeping

Condition X.C.1: Recordkeeping for CAM.
Condition X.C.2: Visible Emissions Observation Records.

Testing

Condition X.D.1: Requirement for testing/monitoring ports.

Reporting

Condition X.E.1: Reporting for CAM

Calculation Demonstration for the Particulate Matter Standard

Periodic monitoring for particulate matter emission rates is not required in the permit, because monitoring uses visible emissions as a parametric measure of normal control equipment operation. The fluidized bed dryer for the soybeans is typically the largest source of particulate emissions for the facility. The calculations below show that the likelihood of exceeding the standard is not great.

Fluidized Bed Dryer = 122 tons/hour x 7.2 lbs/ton = 878.4 lbs/hr x (1-.99) = 8.78 lbs/hour.

Process Weight Rate = $[E = 55P^{0.11} - 40]$, therefore $E = 55(122)^{0.11} - 40 = \underline{53.3 \text{ lbs/hour}}$.

Therefore, the maximum emission rate for the dryer is well below the Rule 4-4 limit.

GENERAL CONDITIONS of the TITLE V PERMIT

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general condition cite(s) the Article(s) that follow(s):

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections.

A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation, see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

STATE ONLY APPLICABLE REQUIREMENTS

The state-only applicable requirements for this facility are found in the State Only Section of the permit and describe the standards for odor and toxic pollutants:

9 VAC 5-50-140 Standard for Odorous Emissions, and

9 VAC 5-60-320 Standard for Toxic Pollutants

FUTURE APPLICABLE REQUIREMENTS

There are no future applicable requirements.

INAPPLICABLE REQUIREMENTS

Tanks previously subject only to recordkeeping and reporting under 40 CFR 60, Subpart Kb have been exempted by EPA's recent amendment of Subpart Kb (see Wednesday, October 15, 2003, Federal Register, attached). The facility did not report any other inapplicable requirements. The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A.4 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

COMPLIANCE PLAN

There is no compliance plan for this facility.

INSIGNIFICANT EMISSION UNITS

The following units have been identified as insignificant:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
418	D. T. Discharge screw	5-80-720 C.2.a	PM, PM10	less than 5 tons/yr
418a	D. T. Discharge drag	5-80-720 C.2.a	PM, PM10	less than 5 tons/yr
419	Dryer cooler feed drag	5-80-720 B.5.	PM, PM10	less than 5 tons/yr
709	Expander exhaust fan (air break)	5-80-720 B.5.	PM, PM10	less than 5 tons/yr
1, 3, 4, 10-18	Soybean oil storage tanks	5-80-720 B.5.	VOC (hexane)	less than 5 tons/yr
	Soybean oil loadout	5-80-720 B.2.	VOC (hexane)	less than 5 tons/yr
999	Extraction feed drag air break	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
998	Coal silo vent	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
997	Welding Shop	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
42	Weed seed tank	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
17	Elevator hull tank	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
18	Elevator hull tank	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
19	Elevator hull tank	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
20	Elevator hull tank	5-80-720 B.2.	PM, PM10	less than 5 tons/yr
759	Pellet blower	5-80-720 B.2.	PM, PM10	less than 5 tons/yr

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in The Virginian Pilot from May 14, 2010 to June 14, 2010.